

Amendment of the Drawings:

The attached three sheets of drawings include changes to Figs. 2, 3 and 4. These sheets, which include Figs. 2, 3 and 4, replace the original sheets including Figs. 2, 3 and 4.

Attachment: Three (3) Replacement Sheet

-REMARKS-

Drawing Objections:

The Applicants appreciate the Examiner's attention to this application and have added the numbers indicated by the Examiner as missing from the drawings but present in the specification. With respect to the designation "LD1" on page 9, line 14, the Applicants have corrected the specification to indicate "L1" to make this designation consistent with the drawings. A similar correction was made on page 9 at line 14. Also, the Examiner noted that reference number 810 was not shown in Fig. 4. It appears that the number 840 was mistakenly used to show the microprocessor in Fig. 4. The Applicants have corrected this mistake in the drawings, replacing the number 840 with 810.

The Examiner noted that the number 840 had been used multiple times in Figs. 3 and 4. In reviewing these Figures, it appears that the number 840 was improperly used to indicate the processor in Fig. 4, and incorrectly in the specification to refer to the power source in Figs. 3 and 4. As such, the power source has been correctly identified in the Figs. and specification as X1, and appropriate correction has been made to the drawings. Whereas reference number 840 now correctly refers to the switches SW1-SWn. The Examiner also noted that the reference number 890 had been used in two places in Fig. 3. It appears that this reference number was mistakenly used in connection with Fig. 4, and as such has been removed therefrom, and as such, reference number 890 now refers only to the converter shown and discussed in the specification with regard to Fig. 3.

In addition, in Fig. 4 reference number U2 that is part of the first load driver circuit 860 has been changed to U1, while reference number U3 that is part of the second load driver circuit 880 has been changed to U2 to make them consistent with Fig. 3 and the discussion in the specification. Furthermore, in Fig. 4 the resistor R2 of the limiting circuit 830 of the zero cross detecting circuit in Fig. 4 has been changed to R4 to make it consistent with Fig. 3.

Additionally, the reference number "MOC1" has been changed to "MOC2" to make it consistent with the specification.

The designation "computer" has also been added to the block 891 in Fig. 3, while the designation "PC" has been removed so as to make Fig. 3 more consistent with the discussion in the specification.

Specification Objections:

In the specification, the Examiner noted that "M2" and "400" had both been used to refer to the motor fan on page 6, line 21, and page 7, line 12. In reviewing the specification, the Applicants found that "M2" had been used in both places and believes that this objection is moot.

The Examiner also noted typographical errors, where the number 312 had been mistakenly used to indicate the holes 320 and where number 801 was mistakenly used to designate the microprocessor 810. Appropriate correction has been made in the specification on page 8, line 8, and page 11, line 8, respectively.

As previously noted, the Applicants have corrected reference to LD1 on page 9, line 14 to indicate "L1" as has been used elsewhere in the specification and drawings.

The Examiner also noted reference number U1 had been used in connection with both the triac and the regulator. The Applicants have corrected the reference to voltage regulator on page 12, line 1 to indicate the reference number V1. In reviewing Fig. 3, this device was improperly referred to by the reference number D1. Appropriate correction has been made in the drawings, as well. The Examiner noted the number 870 had been improperly used in connection with first driver circuit on page 12, line 15. The Applicants have corrected this by replacing the number 870 with the appropriate number 860.

The Applicants have also corrected the informalities noted by the Examiner in paragraph 6 of the Office Action.

In reviewing the above, the Applicants discovered additional typographical errors in the specification and have made the appropriate corrections. In particular, the voltage source 805 is now identified as voltage source X1; the switches SW_1-SW_n are now referred to as switches SW_1-SW_n 840; the light emitting diodes L1 to Ln are now identified by the reference numeral 805; and the remote site is now referred to by the by the reference number 894. The Applicants also noted a typographical error in claim 2 and have made appropriate correction.

Claim Rejections

The Examiner has rejected claims 1-2, 6-7, and 14 under 35 U.S.C. §102(b) as being anticipated by Allen et al. (US 5,995,884), hereinafter Allen. After carefully considering the Examiner's comments, the Applicants have amended independent claim 1, and several of the dependent claims to further define over Allen. As such, claim 1 now recites a microprocessor maintaining at least one operational parameter used to control the at least one electrically powered device, the microprocessor configured to collect and store performance data associated with the electrically powered device. Claim 1 also recites a

port electronically connected to the microprocessor for selectively connecting the floor care appliance to a personal computer through a digital pathway, the personal computer configured to modify the at least one operational parameter based on the collected performance data.

Based on the recitation above, claim 1 allows the microprocessor to collect and store performance data, which can be later used by a personal computer in modifying an operational parameter at the microprocessor. In contrast, Allen teaches a self-propelled vacuum system that provides a vehicle (vacuum) that communicates wirelessly with a personal computer that executes software, so as to control the operation of the self-propelled vacuum. However, Allen, at least at column 23, lines 1-16 teaches that the control system maintained by the vehicle (vacuum) does not provide any means for storing a map of the environment, determining the vehicle's location, planning an intended path, or evading obstacles. Allen at least at col. 23, lines 8-16, goes on to disclose that the only two functions of the control system are to (1) relay information from the various vehicle sensors to the control program executed on the host computer, and (2) to control the various vehicle systems in response to simple commands from the host computer. Although, Allen does teach the communication between the vehicle (vacuum) and the host computer as well as the transmission of status information to the host computer (column 24, lines 29-30), this communication and transfer of data is continuous and on going. This is in contract to claim 1, which allows the performance data to be stored at the microprocessor and modified at any desired time when the user selectively connects the port to the microprocessor. Thus, because Allen does not teach each and every element of claim 1, the Applicants respectfully request that the rejection of claim 1, and claim 2 depending therefrom be withdrawn.

With regard to claim 6, it has been amended in a similar manner to that of claim 1, however, claim 1 is directed to selectively connecting the floor care appliance to a personal computer through a wireless connection. Thus, for the reasons set forth with regard to Allen identified above with regard to claim 1, the Applicants submit that each and every element of claim 6 is not taught or suggested in Allen. As such, the Applicants respectfully request that the rejection of claim 6, and of claim 7 depending therefrom be withdrawn.

Claim 14 has also been amended to define over Allen, such that claim 14 now recites a method comprising the steps of providing a floor care appliance with a microprocessor for controlling the at least one electrically powered device in accordance with at least one operational parameter; collecting and storing performance data based on the operation of the floor care appliance; selectively connecting the microprocessor to a personal computer through a digital pathway; and modifying the at least one operational parameter based on

the performance data collected at the collecting step. Thus, due to the distinguishing amendments presented, and in part based on the discussion above, the Applicants submit that Allen does not teach or suggest each and every element of claim 14, as such the Applicants respectfully request that the rejection of claim 14 be withdrawn.

Claims 1-4, 6-9, 14, 16, and 18 have been rejected under 35 U.S.C. §102(b) as being anticipated by Murray et al., hereinafter Murray. After considering Murray, the Applicants have amended claim 1, in the manner previously discussed. Murray, at least at column 2, paragraph 0026, teaches the communication of performance data, from equipment, such as a vacuum, that includes a control unit to a computer using a communication means. Murray also teaches that the communicated data can be analyzed, and the data could be uploaded back into the equipment for later use and function. (page 3, paragraph 0027). However, Murray does not teach or suggest modifying one or more operational parameters that are used to control the electrically powered device (vacuum) based on the performance data the is communicated to a computer as in Applicants' claim 1. That is, while Murray teaches uploading data back into the equipment (vacuum cleaner), Murray does not teach modifying an operational parameter associated with the equipment based on the performance data that is transferred from the equipment. Thus, because each and every limitation of claim 1 is not taught or suggested in Murray, the Applicants respectfully request that the rejection of claim 1, as well as claims 3-4 depending therefrom be withdrawn.

Because claim 6 has been amended in a manner such that it is identical to claim 1 except for the recitation in claim 6 of a wireless connection, the Applicants submit that the arguments pertaining to claim 1 are equally applicable to claim 6. As such, because each and every limitation of claim 6 is not taught or suggested by Murray, the Applicants respectfully request that the rejection of claim 6, and claims 7-9 depending therefrom be withdrawn.

With regard to the rejection of claim 14 it has been amended in the manner discussed above in connection with the rejection based on Allen. In particular, claim 14 recites modifying the at least one operational parameter based on the performance data collected at the collecting step. In contrast, Murray only teaches analyzing data transferred from the equipment (vacuum), and uploading data from a computer to the equipment (vacuum) for later use and function. Thus, Murray does not teach or suggest modifying the at least one operational parameter based on the operation of the floor care appliance, as in Applicants' claim 14. Thus, because Murray does not teach or suggest each and every limitation of claim 14, the Applicants respectfully request that the rejection of claim 14 be withdrawn.

With regard to the rejection of claim 16, it has been amended to further define over Murray, such that it now recites providing the floor care appliance with a microprocessor for controlling the at least one electrically powered device in accordance with at least one operational parameter; collecting performance data based on the operation of the floor care appliance at the microprocessor; connecting the microprocessor to a personal computer through a digital pathway; exchanging data between the microprocessor and the personal computer; connecting the personal computer to a remote computer; analyzing the collected performance data at the remote computer; and updating the microprocessor with new operational parameters based on the analyzing step. As has been discussed, Murray does not teach or suggest the updating of the microprocessor with new operational parameters based on the analysis of collected performance data that is based on the operation of the floor care appliance. Thus, because each and every limitation of claim 16 is not taught or suggested by Murray, the Applicants respectfully request that the rejection of claim 16, and claim 18 depending therefrom be withdrawn.

The Examiner has also rejected claims 5 and 10 under 35 U.S.C. §103(a) as being unpatentable over Murray. However, based upon the amendments made to independent claims 1 and 6, which recite limitations not taught or suggested by Murray, and from which rejected claims 5 and 10 respectively depend, the Applicants respectfully request that the rejection of claims 1 and 6 be withdrawn.

The Examiner has also rejected claims 15 and 17 under 35 U.S.C. §103(a) as being unpatentable over Murray as applied to claims 14 and 16. However, because Murray does not teach each and every limitation of independent claims 14 and 16 from which respective rejected claims 15 and 17 depend, the Applicants request that the rejection of claims 15 and 17 be withdrawn.

The Examiner has also rejected claims 11-13 and claims 20-22 under 35 U.S.C. §103(a) as being unpatentable over Murray in view of Matsushima et al., hereinafter Matsushima. In response, the Applicants have amended claim 11 to recite that the microprocessor maintains at least one operational parameter used to control the at least one electrically powered device, the microprocessor configured to collect performance data associated with the electrically powered device; and a modem connected to the microprocessor for selectively connecting the vacuum cleaner to a remote computer via a modem over a telephone network, the remote computer configured to update the microprocessor with new operational parameters based on said collected performance data.

As discussed above with regard to several of the independent claims, such recitation that the remote computer is configured to update the microprocessor with new operational

parameters based on the collected performance data is not taught or suggested by Murray, nor is it taught by Matsushima. Thus, because each and every element of claim 11 is not taught individually by Murray and Matsushima, nor by their combination, the Applicants respectfully request that the rejection of claim 11, as well as claims 12-13 depending therefrom be withdrawn.

With regard to the rejection of claim 20 the Applicants have amended such claims to further define over Murray and Matsushima, such that claim 20 recites providing a vacuum cleaner with a microprocessor, the microprocessor maintaining at least one operational parameter used to control the at least one electrically powered device; collecting performance data based on the operation of the electrically powered device; providing a modem connected to the microprocessor; connecting the modem to a telephone network; connecting the telephone network to a remote computer; analyzing the performance data obtained at the collecting step; updating the microprocessor with new operational parameters based on the analyzing step; and exchanging data between the microprocessor and the remote computer.

As previously discussed, Murray and Matsushima do not teach the updating of the microprocessor with new operational parameters based on the analyzing of performance data that is based on the operation of the electrically powered device as in Applicants claim 20. As such, because each and every element of claim 20 is not taught or suggested individually by Murray and Matsushima, nor by their combination, the Applicants respectfully request that the rejection of claim 20, and claims 21-22 depending therefrom be withdrawn.

In view of the foregoing amendments and arguments presented herein, the Applicants believe that they have properly set forth the invention and accordingly, respectfully request that the Examiner reconsider and withdraw the objections and rejections provided in the last Office Action. A formal Notice of Allowance of claims 1-22 is earnestly solicited. Should the Examiner care to discuss any of the foregoing in greater detail, the undersigned attorney would welcome a telephone call.

Should the Examiner wish to discuss any of the foregoing in more detail, the undersigned attorney would welcome a telephone call.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Shannon V. McCue', written over a horizontal line.

Shannon V. McCue, Reg. No. 42,859
Renner, Kenner, Greive, Bobak, Taylor & Weber
First National Tower - Fourth Floor
Akron, Ohio 44308-1456
Telephone: (330) 376-1242
Facsimile: (330) 376-9646

Attorney for Applicants





